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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,519	02/25/2004	Yasushige Tomiyoshi	82478-5200	2767
21611	7590	04/07/2006	EXAMINER	
SNELL & WILMER LLP 600 ANTON BOULEVARD SUITE 1400 COSTA MESA, CA 92626			SANTIAGO, MARICELI	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/786,519

**Applicant(s)**

TOMIYOSHI ET AL.

**Examiner**

Mariceli Santiago

**Art Unit**

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5,11 and 12 is/are rejected.
- 7) ☒ Claim(s) 3,4 and 6-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Response to Amendment***

The Amendment, filed on December 30, 2006, has been entered and acknowledged by the Examiner.

Claims 1-12 are pending in the instant application.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasuda et al. (US 5,629,586) in view of Haraden et al. (5,296,780).

Regarding claims 1 and 11, Yasuda discloses a compact self-ballasted fluorescent lamp, comprising an arc tube including a glass tube at least partially bent, and electrodes sealed at both ends of the glass tube, each electrode including a filament coil, and a holder having a pair of insertion openings formed therein, and holding the arc tube by fixing the ends of the glass tube inserted through the insertion openings, wherein the ends of the glass tube are inserted to such positions that enable each filament coil to be positioned within the holder, and having a distance L1, in an insertion direction of the ends of the glass tube, between each filament coil and an edge of corresponding one of the insertion openings.

Yasuda fails to disclose the limitation of the distance L1 having a minimum range in a range of 0 to 10 mm inclusive. However, in the same field of endeavor, Haraden discloses a fluorescent lamp comprising a holder having an insertion opening formed therein, and holding

the arc tube by fixing the ends of the glass tube inserted through the insertion openings, wherein the ends of the glass tube are inserted to such positions that enable each filament coil to be positioned within the holder, and a minimum distance  $L_1$ , in an insertion direction of the ends of the glass tube, between each filament coil and an edge of corresponding one of the insertion openings is in a range of 0 to 10 mm inclusive. The disclosed arrangement provides support to the lamp envelope in the event that the envelope cracks in the area immediately adjacent the electrode filament ends. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the minimum distance disclosed by Haraden in the fluorescent lamp of Yasuda in order to provide support to the lamp envelope in the event that the envelope cracks in the area immediately adjacent the electrode filament ends.

In regards to the recitation "operatively retain a larger amount of heat emitted from the filament coil to elevate the temperature of an inner surface of the glass tube within the holder when compared to the inner surface of the glass tube adjacent and exterior of the holder wherein a reduction in the mercury over a life of the fluorescent lamp is reduced and raising characteristics of a start time is decreased" as specified in claim 11, the combination Yasuda-Haraden disclose the structural limitation as claimed, accordingly it is considered to meet the claimed functional recitation.

Regarding claim 5, Yasuda discloses the inclusion of mercury within the arc tube, but fails to exemplify the amount in mg included, particularly within the range of 2 to 5 mg inclusive. One skilled in the art would reasonable contemplate optimization of the mercury amount within the arc tube as a matter of design engineering since such estimation for the optimum lamp operation is considered within the level of skills in the art. Furthermore, applicants claimed 2 to 5 mg range does not solve any of the stated problems or yield any unexpected result that is not

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within the scope of the teaching applied. Therefore, it would have been obvious to one of ordinary skill in the art to modify the invention of Yasuda by incorporating mercury in a range of 2 to 5 mg inclusive since such modification is considered an obvious matter of design engineering.

Regarding claim 12, Yasuda discloses a fluorescent lamp wherein the holder is formed of plastic.

### ***Allowable Subject Matter***

Claims 2-4 and 6-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 3, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 3, and specifically comprising the limitation of mercury is singly enclosed in the glass tube, and an inner diameter of the glass tube is in a range of 5 to 9 mm inclusive.

Regarding claim 3, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 3, and specifically comprising the limitation of the arc tube is thermally connected to the globe via a heat conductive medium, at a coolest position of the arc tube during lighting, or a position in a vicinity of the coolest position. Claim 10, dependent from claim 3, is allowable for the same reasoning.

Regarding claim 4, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 4, and specifically comprising the limitation of the arc tube has a double-spiral construction in which the glass tube is wound from a middle to

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both ends thereof around one axis. Claims 6 and 9, dependent from claim 4, are allowable for the same reasoning.

Regarding claim 7, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 7, and specifically comprising the limitation of a winding pitch of the glass tube is changed to enlarge at such a position back from each end by 60 to 120° inclusive with respect to the axis, as viewed in the direction of the axis.

Regarding claim 8, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 8, and specifically comprising the limitation of a gap between the other adjacent spiral parts is in a range of 1 to 3 mm inclusive.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 5, 11 and 12 have been considered but are moot in view of the new ground(s) of rejection.

### ***Contact Information***

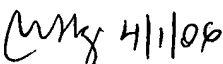
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariceli Santiago whose telephone number is (571) 272-2464. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 4/1/06  
Mariceli Santiago  
Primary Examiner  
Art Unit 2879